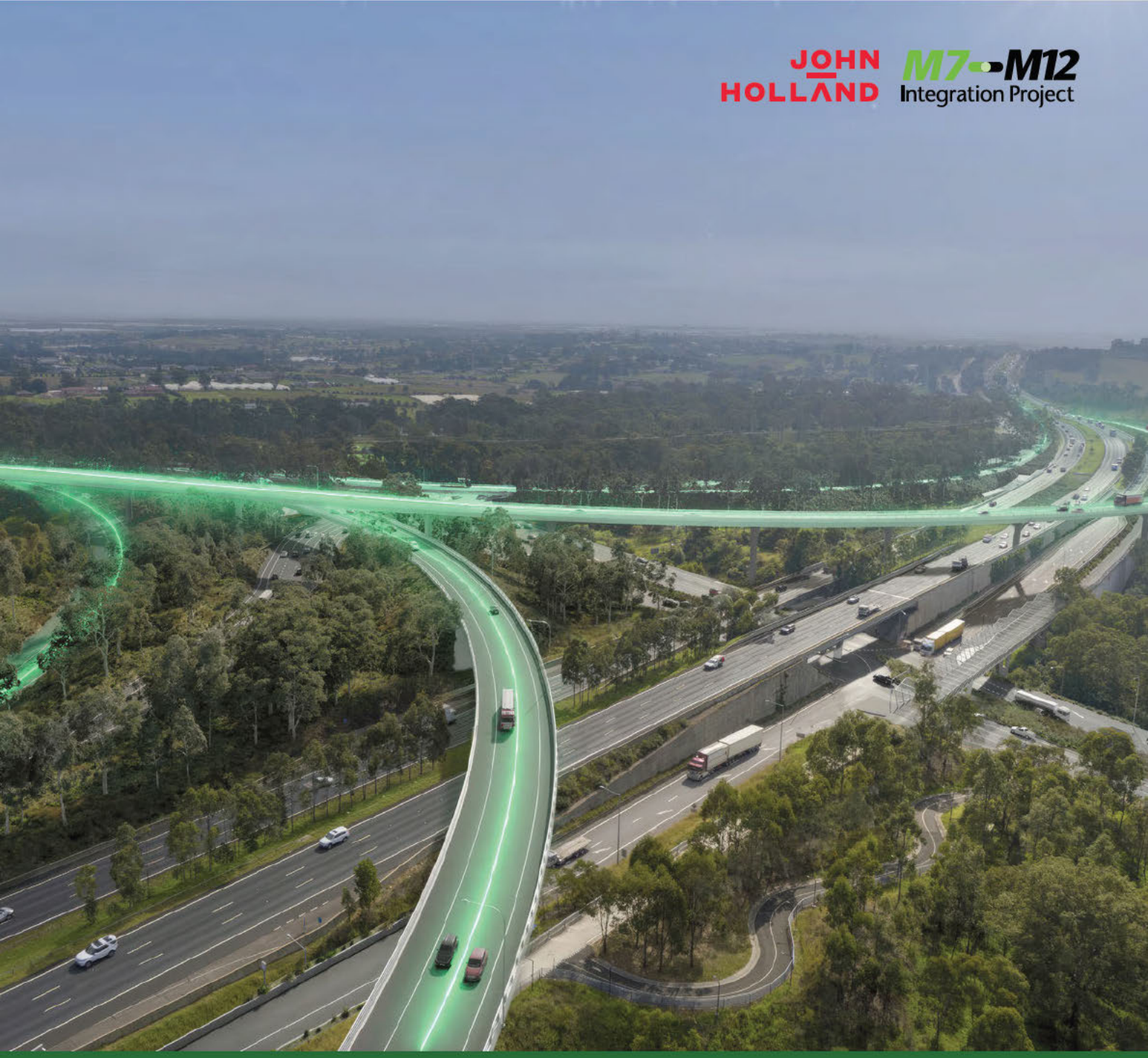
JOHN HOLLAND

M7-M12 Integration Project



The M7-M12 Integration project

Sustainability Annual Report
August 2024

sustainability

Document Details

Project Number	7045
Document Number	M712UDC-JHGRP-M7A-SB-RPT-000003

Review Record

REV	REVIEWED BY	COMMENTS	SIGNED	DATE
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]		[redacted]
[redacted]	[redacted]	[redacted]		[redacted]

Distribution

WSO Co / TfNSW

NAME	STAKEHOLDER
[redacted]	WSO Co
[redacted]	TfNSW

JOHN HOLLAND SENIOR LEADERSHIP TEAM

NAME	ROLE
[redacted]	Project Director
[redacted]	Environmental and Sustainability Manager

Contents

1. Executive Summary

1.1 General Overview

This report covers the period between August 2023 and August 2024 (inclusive). The M7-M12 Integration project has continued its progress in implementing its sustainability management plan, procedures, and initiatives as demonstrated below and via external reviews of the project.

The project continues to update and maintain its sustainability assurance framework which provides the team with a comprehensive picture of the project's performance against Infrastructure Sustainability Council (ISC) and Scope of Works and Technical Criteria (SWTC) requirements, audit schedules as well as an action plan moving forward.

The project over the past year has held its ISC kick off workshop, had its base case verified and had its weightings assessment verified. The project has drafted and submitted to WSO Co and TfNSW most of the credits required for the rating for review, excluding those which are still dependent on external information such as the Stage 2 Design and Landscape Plan (DLP), which is due in November.

The project is targeting stretch credits relating to knowledge share with Sustainability Manager [redacted] presenting to industry at several industry conferences, conducting bushfire modelling in relation to climate change risk, and targeting level 3 for certain environmental discharge credits. To date the feedback on credit summary forms is positive from our client WSO Co.

The project Sustainability team has also been active in implementing sustainability innovations during construction, for example the expected Australian 1st mid-size fully electric excavator which worked on the project during June. The team have also advanced the availability of solar based crushed glass for asphalt application and sustainably sourced silt socks.

The project Innovation Committee has also been established and has been working since construction started. Sustainability Manager [redacted] has been chairing the committee and has been working with the wider project team in encouraging project staff to submit ideas and embedding innovations onto the project which carry benefit for sustainability,

technology, wellbeing and commercial advantage. The M7-M12 project is the first project to trial the use of an innovation committee.

The project's strong sustainability progress over the year has been reinforced by multiple Independent Sustainability Professional (ISP) Reviews and external audits, as well as additional internal audits. The findings from each, and particularly the more detailed ISP Review have been positive to date, the project Independent Sustainability Profession (ISP) and external auditor noting that "Strong sustainability management is evident" and that "the project continues to perform at a high level of sustainability".

1.2 About the M7-M12 Integration project

The M7-M12 Integration project will support future development growth in Western Sydney by improving travel times and congestion. Once complete, the project will provide direct access to commercial and residential hubs, and the new Western Sydney International Airport.

The $1.7 billion M7-M12 Integration project will support the growth of Western Sydney by widening the M7 Motorway and deliver a seamless connection to the M12 Motorway.

This project will:

- reduce congestion and travel times
- improve safety and provide more reliable journeys for road users, including freight
- provide a critical connection to the Western Sydney International Airport and Aerotropolis
- create thousands of jobs during construction.

John Holland is proud to be working with WSO Co and its partners to deliver the widening of the M7 Motorway, the reconstruction of Elizabeth Drive east and the new M7-M12 Interchange.

The contract was awarded to John Holland in 2023 and construction of the project is expected to take three years and will be open to traffic in 2026.

"At the M7-M12 Integration project, sustainability is an integral part of our culture, and our team is committed to creating a lasting impact that goes beyond the physical infrastructure and service enhancements that our projects offer."

– [redacted]
Project Director

2. Sustainability Management

2.1 Sustainability Management

The project has established a robust sustainability management system, which includes a Sustainability Management Plan, a Sustainability Policy, and a Sustainability Assurance Framework. The Sustainability Management Plan defines the sustainability vision, objectives, and targets of the project, as well as the strategies, actions, and indicators to achieve them. The Sustainability Policy outlines the commitment and principles of the project in relation to sustainability and is publicly available on the project's website: https://www.m7m12integrationproject.com.au/jhg/m7-m12-integration-project/environment.

The Sustainability Assurance Framework allows the team to monitor, report, and audit the sustainability performance of the project, as well as the roles and responsibilities of the project team and stakeholders.

The project has also set up a Sustainability Leadership Committee (SLC) to oversee and guide the sustainability performance of the project. The SLC is chaired by the Project Sustainability Manager and consists of representatives from the project team. The SLC meets quarterly to review the sustainability progress, issues, and risks of the project, as well as to review and endorse sustainability initiatives and innovations. The project has also established an Innovation Committee to identify and implement sustainability initiatives and innovations. The Innovation Committee is chaired by the Sustainability Manager and consists of representatives from the project team. The Innovation Committee meets fortnightly to discuss and evaluate potential sustainability initiatives and innovations, as well as to monitor and report on their implementation and outcomes.

The project has engaged an Independent Sustainability Professional (ISP) to conduct quarterly reviews of the project's progress against the IS rating scheme and SWTC requirements, as well as to provide feedback and recommendations. The ISP is a registered IS Accredited Professional with the Infrastructure Sustainability Council (ISC) and has extensive experience and expertise in sustainability and infrastructure projects. The ISP reviews the project's sustainability documentation, data, and evidence, and verifies the project's compliance with the IS rating scheme and SWTC requirements. The ISP also provides guidance and advice to the project team on how to improve and optimise the sustainability performance of the project, as well as to identify and implement sustainability initiatives and innovations.

"John Holland Group (JHG) are committed to leaving a positive and lasting legacy through environmental, social, economic and governance for the delivery of the M7-M12 Integration project. "

– M7-M12 Sustainability Policy

JHG will endeavour to embed best practice environmental and sustainability outcomes through:

- Integration of social, environmental and economic factors into decision-making, planning, design and construction.
- Continuous improvement in management systems, complying with environmental legislation, regulations and other requirements. As well as supporting initiatives that go beyond compliance requirements.
- Integrating a culture of innovation and collaboration through all layers of management and delivery, from subcontractors through to senior management.
- Ensuring procurement documentation, systems and processes drive sustainability and innovation and.
- Ensuring sustainability aspects are evaluated in the supplier selection process.

We are also committed to:

- Minimising energy use and reducing emissions.
- Designing and constructing infrastructure to be resilient or adaptable to climate change impacts.
- Minimising biodiversity and ecological impacts and implementing restorative actions
- Minimising the use of non-renewable resources and quantity of waste disposed to landfill and
- maximising the use of recycled materials.
- Minimising noise, water, land and air pollution generated by the project.
- Procuring goods, services, materials and works that over their lifecycle deliver value for money and contribute to the environmental, social and economic wellbeing of the community.
- Conserving and enhancing cultural heritage values.
- Providing community benefits through community safety, community engagement and social inclusion.
- Working with our local and regional supply chain to maximise opportunities for First Nations Businesses and Young people, workers; small and medium size Enterprises and local businesses from Western Sydney and maximise employment opportunities.
- Enriching the local economies and communities we work within and procuring local materials and services where possible.
- Providing local training and/or education to develop workforce skills.
- Leaving a positive, lasting legacy and a net positive benefit for society and the environment.

– M7-M12 Sustainability Policy

The project has also participated in various internal and external audits, workshops, and forums to ensure continual improvement and knowledge sharing on sustainability issues. The project has undertaken internal audits which are shared via aconex with our clients, as well as external audits by the project's independent sustainability professional. The project has also attended workshops and forums organised by John Holland, TfNSW, and other industry bodies and stakeholders, to learn from best practices, share experiences and insights, and network with sustainability professionals and experts.

The team have also been implementing specific aspects outlined in the Sustainability Management Plan, such as setting up a method for the review of subcontractor performance against sustainability requitements. Subcontractor reviews will be undertaken inside John Hollands PPW system. The project has also set up advanced tracking dashboards for monitoring National Greenhouse and Energy Reporting Scheme (NGERs) data submissions from subcontractors against the hours they work, as well as project performance against sustainability targets.

The Sustainability team have also started the process of reviewing the sustainability related risk items as part of reviews detailed in the construction management plan and after incidents which relate to environmental management measures.

Credit summary forms relating to management have been drafted and reviewed by the project team and the projects key stakeholders TfNSW and WSO Co.

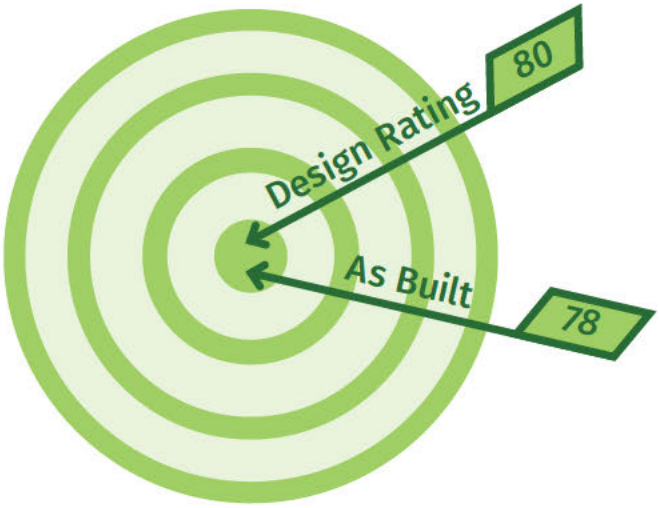
2.2 Performance Against Sustainability Objectives and Targets

Compliance against the SWTC requirements of Table D.5-2 is detailed further under Section 6 - Progress against Sustainability Targets.

Performance against sustainability requirements is discussed during a monthly project sustainability meetings with key stakeholders TfNSW and WSO Co with these meeting being minuted. Sustainability performance is also discussed at the weekly internal environment and sustainability meetings aswell at the quarterly sustainability leadership committee meetings.

The project has demonstrated strong sustainability performance in terms of meeting its objectives and targets, pursuing sustainability initiatives and innovations, and integrating sustainability in design and procurement. The project has also made significant progress in its IS rating submission, achieving verification of its base case and weightings assessment, and drafting most of the credit summary forms required for the round 1 design submission. The project is targeting a Design Rating score of 80 and an As Built score of 78, which would exceed the project requirements. The project has also complied with 36% of SWTC sustainability requirements, with the remaining ones either in progress or not yet relevant.

M7-M12 INTEGRATION PROJECT TARGET ISC SCORES:



The project has also addressed the climate risks and adaptations for the project, conducting a Climate Change Risk Assessment (CCRA) and a stakeholder workshop, and incorporating adaptation measures in the design and construction phases.

As design reaches final detailed design stages and construction activities have increased, the Sustainability team is working very closely with the construction team. The construction team have adopted a range of sustainability initiatives across the project such as trialling the potential Australian First mid-size electric excavator and implementing solar powered site sheds within the constraints of the M7 Median works.

The project team has also been busy conducting water, materials and energy modelling during the year with modelling showing opportunities to reduce energy, materials and water use during construction have been identified, analysed and implemented.

42% projected reduction in construction potable water use

Projected 84% of water sourced from non-potable sources

The project currently projects a 42% reduction in construction potable water use and an 84% of water which is sourced from non-potable sources, this would ensure the project conforms with its contractual requirements for construction water use. Operational water modelling has also occurred with reference to the landscaping establishment period and asphalt resurfacing over the design life of the asset.

Materials modelling has also been completed demonstrating how materials with a low embodied environmental impact have been identified, analysed, and implemented across the project. The project is currently modelling a 16% reduction in supply chain emissions versus the ISC verified materials related base case which would ensure the project conforms with its contractual requirements. The project is also tracking the amount of supplementary cementitious material (SCM) which is being used in the project's concrete works with the project currently on track to meets its requirements for minimum SCM use in concrete.

27% projected reduction in scope 1 and 2 emissions for construction based electricity

82% projected reduction in scope 2 emissions for operational electricity

Finally, energy modelling shows that construction stage energy (electricity) requirements are in progress to be achieved. For example, the project expects a 27% reduction in scope 1 and 2 emissions for construction-based electricity which would ensure the project conforms with the percentage reduction in greenhouse gas emissions from construction energy use versus a business-as-usual baseline. This will be achieved by using greenpower as a part of the project's electricity use. The project also expects an 82% reduction in scope 2 emissions for operational electricity which would see the project conform with the requirements for the percentage reduction in greenhouse gas emissions from operational energy versus a business-as-usual design. The design includes low voltage ITS and low wattage lighting to achieve this reduction.

The Sustainability team have also worked closely with the procurement team to ensure SWTC sustainability targets are embedded into procurement. A good example of this was outlining and discussing the 60% office waste landfill diversion rate requirement with prospective waste contractors.

99% of Construction and Demolition waste recycled

2.3 Status of Infrastructure Sustainability Rating

The project continues to track well against its ISC obligations. The below table provides a detailed overview of its progress on complying with the ISC ratings process detailed in clause 3.4 of the Sustainability management plan, with dates listed to detail when the ISC milestone was achieved and indicative dates for the outstanding elements of the ISC rating which haven't been achieved yet.

Table 1: ISC rating milestones

ISC RATING MILESTONE	DATE ACHIEVED
Sustainability Management Plan approved	24/08/2023
ISC Ratings assessment executed	27/09/2023
ISC Kick-off Meeting	30/10/2023
Submission of Base Case Proposal	8/11/2023
Transmittal of ISC action plan to WSO Co	10/11/2023
Feedback on R1 Base Case Proposal Received	23/01/2024
Confirmation Base case is verified	29/2/2024
Submission of Weightings Assessment	8/03/2024
Round 1 Weightings assessment comments received	23/04/2024
Submission Round 2 Weighting assessment	18/06/2024
Confirmation weightings assessment is verified	23/7/24
Design Rating round 1 Submission expected	Expected December 2024
Design Rating round 2 Submission expected	Q1/2 2025
As Built Round 1 Submission expected	Expected 2025/2026

The team have continued to draft Credit Summary Forms (CSFs), as well as consult with various Suitably Qualified Persons for a range of credits, including ecology consultants [redacted] for the Ecology credits, [redacted] for Materials, Energy, Water, and climate change credits as well as a range of internal John Holland resources for other credits including Stakeholder and Workforce credits.

The majority of CSFs have been submitted to WSO Co and TfNSW for review with the remainder to be sent after Stage 2 of the Design and Landscape Plan (DLP) has been released for comment. The feedback to date from WSO Co has been largely positive with opportunities for improvement largely around minor comments around updating evidence to the most recent/relevant versions prior to submission. The project is still on track to submit its Round 1 Design submission to ISC within 1 month of release of the DLP to WSO Co and TfNSW for comment.

2.4 Climate Change

The initial Climate Change Risk Assessment (CCRA) workshop was carried out in August with two workshops on risk identification and adaption measures for design and construction. The project has continued to work through relevant modelling and adaptations required for the identified risks. An external stakeholder's workshop was also carried out in March 2024 which had a good turnout of external stakeholders including local councils, aboriginal stakeholders and local community groups. The CCRA was reviewed by TfNSW and WSO Co with comments addressed inside the CCRA and the accompanying report.

The projects CCRA has also been forwarded to [redacted] for comment of which there are none. [redacted] have advised that they plan to use the projects CCRA to inform their operational CCRA and associated management plans. This would be a significant part of achieving level 3 criteria for the Cli-2 credit.

Following the external stakeholder session for Climate Change risks and issues held on the 13th of March 2024, the project team have reached out to additional utilities stakeholders to determine if they have any feedback on the climate change risks, issues and adaptions.

The project is also working to ensure that the various requirements for Cli-1 are met. The team is working to explore modelling bushfire risks associated with RCP8.5 and RCP4.5 climate scenarios over the project design life. The CSFs related to climate have been sent to WSO Co for review.

2.5 Sustainability in Design

Sustainability in design was a primary focus for the Sustainability team over the past year. Workshops were carried out and a 'Sustainability in Design' report template was developed and sent to the design team for incorporation into all design reports. This design report template allowed the sustainability and design teams to ensure sustainability related requirements and initiatives are captured. The following sustainability in design workshops took place.

- 28/6/23 - Design Deliverables and Sustainability Requirements
- 9/8/23 - Sustainability Requirements Meeting with JH design team
- 25/8/23 - Sustainability in Design workshop with design JV
- 6/9/23 - Operational Energy and Carbon reduction workshop
- 7/9/23 - Sustainability in Urban design and landscaping workshop
- 20/9/23 - Sustainability in Design - Pavements and Structures workshop
- 5/10/23 - Sustainability in Design - Bridges and retaining walls workshop

Design reports are primary evidence sources for ensuring ISC requirements are met. The Sustainability team have reviewed 100% of reports and drawings to ensure sustainability and ISC requirements are addressed and incorporated into design documentation. A good example of this are the landscape and design plans and the integration of Urb-1 credit requirements. Design drawings also include sustainability items, for example contractual requirements relating to SCM minimum contents and reclaimed asphalt pavement in asphalt recommendations are included.

3. Initiatives and Innovations

During the year, the team have continued to progress a range of initiatives identified in earlier workshops and implementation and has seen some additional sustainability wins through the project. The below table of initiatives are currently being explored or have already been implemented as part of the Inn-1 ISC credit:

Figure 2: Tiny surveyor

Table 2: Initiatives and innovations table

INITIATIVE TITLE	DESCRIPTION	STATUS
[redacted]	Vehicle tyre debris mats which are made from 100% recycled materials	Fully implemented
Recycled solar PV Glass Sand in asphalt	The use of solar PV glass in dense graded asphalt works	Discussing option with asphalt suppliers before main works tender Trials being planned
Fauna mortality survey	The use of vehicle mounted cameras and AI to detect fauna mortality, potential Australian 1st innovation implemented across the M12 project	Fully implemented
Sustainability Metrics in Pavement Design	Using carbon emissions costings as part of the design/section process for different pavement profiles	Fully implemented
Tiny surveyor (Position Partners)	An automated electric surveyor reducing operator risk and increasing productivity	Fully implemented
Mid-Size Electric Excavator	First fully electric mid-size excavator in Australia used on project works	Fully implemented
[redacted]	Carbon capture technology from carbon emitting sources and creating carbon negative additives and Supplementary Cementitious Material (SCM) for concrete	Working with supplier to purchase product and embed in concrete supplier mix designs
[redacted] Silt socks	Silt socks using 100% recycled materials, which provide for simple and durable circular economy solutions to problem wastes	Fully implemented

The team are working closely with suppliers and subcontractors to ensure innovations can be embedded into the project. A good example of this is the solar PV glass in asphalt, where the project team have engaged prospective asphalt contractors including the early works contractor [redacted] to develop asphalt mix designs. The team is also working with the supplier to ensure the glass will conform with TfNSW specifications and EPA exemption requirements.

Embedding these innovations will require collaboration with not just John Holland and the suppliers but with WSO Co and TfNSW representatives. The project asks TfNSW representatives to support the project with approvals which TfNSW agreed to assisting with.

There are two sustainable initiatives which were implemented which the project team wish to highlight as they are highly visible sustainable elements: the mid-size fully electric excavator and the solar/battery powered site hubs.

The mid-size, fully electric excavator is the first of its kind in the country. It was organised and floated to AF9 by Sustainability Manager [redacted] after discussions with the supplier Anric. The excavator can reduce scope 1 and 2 emissions by as much as 75% and reduce operational energy costs. More details on it can be found on this website https://hitachicm.com.au/2023/12/14/electrifying-anric/, (see Figure 3).

The other initiative is the solar/battery powered site sheds. These site hubs supplied by [redacted] are powered by integrated solar panels and batteries. With typical site sheds usually powered by diesel generators, these site sheds on the M7 not only reduce emissions but also associated vehicle movements for refuelling and maintenance. Examples of these site sheds can now be seen in use along the M7 Median (see figure 4).

The project has established its Innovation Committee with sessions occurring on a fortnightly basis. Sustainability Manager [redacted] is chair of the committee. The committee has received 140 ideas to date. The online platform called [redacted] is used as the committee's platform for managing ideas. The Innovation Committee also leverages expertise from the wider John Holland Technology, Engineering, and Knowledge group. See below figure of project innovation committee banners which are located around the site compounds.

Figure 3: Mid-size fully electric excavator

Figure 4: Solar powered site shed on M7 median

Figure 5: Project innovation committee banner

4. Sustainable Procurement

4.1 Sustainable Procurement Management

Procurement has also been a key focus during the year. Sustainability is well embedded into the procurement process. Sustainability commitments are made in the project specific sustainability policy, there is a section on sustainability in supplier questionnaires, sustainability has a non-financial weighting on scoring potential suppliers' tender offerings and there is a detailed sustainability section in the scope of works section of project subcontracts aswell as a project sustainability pack which goes with tenders to suppliers.

Sustainability representatives are also present for tender interviews including main works packages being tendered and awarded, for example the concrete main supply package. The concrete supply tender meetings featured several sustainability items and were attended by members of the project's Sustainability team so that requirements were discussed. A good example of this was ensuring that concrete suppliers will be able to supply mix designs which conform with SWTC requirements regarding supplementary cementitious material replacement minimums.

Sustainable procurement processes are well established with the procurement team and the Sustainability team and procurement team are in regular contact with weekly procurement updates coming from the Procurement Manager to the Sustainability Manager.

The team have also set up a method for reviewing subcontractor performance against sustainability requitements. Subcontractor reviews are undertaken inside John Hollands PPW system. For example, the team have completed sustainability reviews of the projects early works contractor for concrete and asphalt supply.

The project has also advanced the reward and recognition of subcontractors in line with Pro-4 credit requirements. The project has created a supplier reward and recognition program called the "Outstanding Delivery Partner award", which is part of the projects "Highway Heroes award" (the monthly reward and recognition program). It is presented quarterly by the project's Senior Leadership Team (SLT).

Credit summary forms relating to procurement have been drafted and reviewed by the project team and the project's key stakeholders TfNSW and WSO Co.

Figure 6: Outstanding Delivery Partner award being presented by [redacted] Project Director

4.2 Supplier Sustainability Engagement

The team have also continued to engage with high impact suppliers, particularly for the project's aggregate, concrete and asphalt supply as these are major material components of the project. The following table details the sustainable initiative meetings/conferences which the team has had with potential and current suppliers regarding sustainability-based opportunities during the year.

Table 3: Supplier sustainability engagement

ISC RATING MILESTONE	DATE ACHIEVED
31/8/23	[redacted]John Holland sustainability presentation
4/3/24	Concrete Supply and Testing - Tenderer interview meeting [redacted]
29/4/24	Project Wide Diesel Fuel Supply - Tenderer Interview [redacted]
23/5/24	[redacted] Low Carbon Concrete Industry Forum
1/8/24	Temporary Asphalting and Spray Seal Early Works tender meeting [redacted]
22/8/24	JHG [redacted] Site Visit
12/9/24 along with several reoccurring meetings	[redacted] asphalt
1-2/5/24	Sydney Build expo
8/5/24	Project Wide Construction Waste - Tenderer Interview [redacted]
14-15/5/24	Future of Construction Summit (FCON)
14/6/24	[redacted] site visit at Eastern creek with construction team
16/5/24	[redacted] (stabilized base supply)

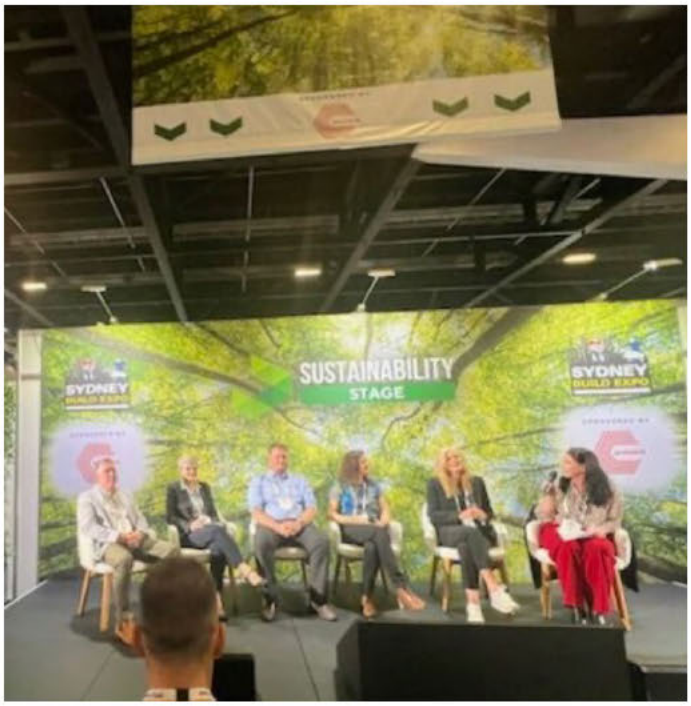
4.3 Modern Slavery

All subcontract packages and questionnaires include a question regarding modern slavery. This question is "Does your organisation have a Modern Slavery Policy and/or Statement in place and does your organisation assess and manage Modern Slavery risks and impacts in its supply chain specifically? Please provide examples". The answer to this question along with other sustainability-based question is used to score the subcontractor and how will they conform with the requirements.

5. Continual Improvement and Audits

5.1 Continual Improvement Initiatives and Collaboration

The Sustainability team have participated in several collaborative events and sessions over the year with both local project teams, wider John Holland, industry wide events and TfNSW project teams. These included the Sydney Build Expo on 1-2/5/24 and the Future of Construction Summit (FCON) on 14-15/5/24. Sustainability Manager [redacted] spoke at both these events on practical pathways to decarbonise the construction industry. He has also been invited to speak at the 2025 Net Zero Construction Summit. These forums are an excellent way to openly communicate and share innovations which will contribute to Inn-1 ISC credits. They also heavily contribute to the project's ISC rating relating to level 3 Man-6 credits.



The following table details some of the knowledge share events which the project sustainability representatives have participated in.

Table 4: Events participated

DATE	EVENT TITLE	KEY POINTS/OUTCOME
Sep 2023, Nov 2023	TfNSW Knowledge share for M12 motorway project	Discussed sustainability knowledge sharing from M12 projects and initiatives.
Nov 2023, March 2024 and May 2024	John Holland Sustainability Specialists forum	Engaged in discussions on sustainability practices and innovations.
Sep 2023, Dec 2023, March 2024 and June 2024	John Holland Operational Sustainability and Environment Forum	Contributed to conversations on operational sustainability and environmental issues.
May 2024	Sydney Build expo and FCON summit	Presented on sustainability in construction, contributing to ISC credits.
Sep 2023, March 2024	TfNSW Roads Group Knowledge sharing workshop	Gained insights on the incorporation of RAP into EME2.
2025 (Invited)	Net Zero Construction Summit	Will speak on net zero initiatives, contributing to project's ISC rating.

The team has also continued a close working relationship with the John Holland Sustainability Team at Upper South Creek (USC), who are pioneering several innovations as well as the ISC v2.1 Rating Scheme. The USC and M7-M12 teams have worked to create and facilitate a NSW based sustainability forum where initiatives and issues can be openly discussed. These workshops have been particularly useful for the team in developing sustainability initiatives.

5.2 Audits

The project has undertaken sustainability audits as per contractual and ISC requirements. These audits are as per the sustainability audit schedule which was shared with TfNSW and WSO Co via aconex reference JH-GCOR-001915 on the 10/11/23. The below table details all sustainability related audits which have taken place for the past year, the title of each audit, the audit results as a percentage and the status of the audit.

Table 5: Audits conducted

AUDIT DATE	AUDIT TITLE	AUDITOR	AUDIT RESULT - PERCENTAGE	STATUS
21/05/2024	Waste to destination audit as per ISC Manual v1.2 Was-1 criteria	[redacted]	100	Closed
20/05/2024	Independent Sustainability Review as required by IS Rating Credit Man-3 and Man-4 Inspection and Auditing	[redacted]	90	Closed
20/05/2024	NGER Audit - Q2 2024	[redacted]	100	Closed
16/04/2024	M7-M12 Integration project - Quarterly Internal Sustainability Audit	[redacted]	98	Open
31/01/2024	NGER Audit - M7-M12 - Q1	[redacted]	100	Closed
16/01/2024	Independent Sustainability Review as required by IS Rating Credit Man-3 and Man-4 Inspection and Auditing	[redacted]	80	Closed
28/11/2023	Waste Management Facility Audit using tool M7M12-FRM-SQE-002-30	[redacted]	100	Closed
28/11/2023	Waste to destination audit as per ISC Manual v1.2 Was-1 criteria	[redacted]	100	Closed
08/11/2023	M7-M12 Integration project - Internal Sustainability Audit	[redacted]	90	Closed
20/10/2023	Independent Sustainability Review as required by IS Rating Credit Man-3 and Man-4 Inspection and Auditing	[redacted]	80	Closed
30/08/2023	M7-M12 Internal Sustainability Audit	[redacted]	75	Closed

Findings from these audits have been positive, with the more detailed ISP Review again noting the project is on track with many of its sustainability objectives and that strong sustainability management evident on the project. The latest ISP review noted key successes include a projected 27% reduction in emissions from construction electricity use. The audit also points out areas for development such as fine-tuning decision-making processes and enhancing stakeholder review mechanisms.

The project will continue to conduct audits as per the requirements of Man-3 and Man-4, as well as quarterly ISP reviews as per Man-3 whilst still in the design phase. The project's next ISP review is scheduled in August. The team was also audited by John Holland Group advisors around NGERs reporting. These audits also noted no issues and that the team has an impressive mechanism for reviewing and tracking NGERs data reporting against work done by subcontractors.

22,000 litres of Biodiesel used to date

The project team has a comprehensive schedule of audits and reporting scheduled as per the requirements of Man-3, 4, and 5, as well as the SWTC which will ensure that the project team has good oversight of its performance against ISC and SWTC requirements. The Sustainability team has and continues to welcome these audits as an opportunity to gain additional insight into next steps, as well as gain guidance from the experienced Sustainability team at the John Holland Infrastructure Group.

5.3 Deficiencies and Areas for Improvement

The audits and ISP reviews have provided the project with a comprehensive check of its systems and performance. A key area of focus lies with drafting CSFs and ensuring evidence is in line with the requirements of the ISC manual. The project is also working hard to ensure the requirements of the SWTC can be met. The following items are high level areas for improvement that have been identified via audits or internal reviews:

- Request a delay of the SWTC requirement for first-round ISC design submission (initially, within two months of the last Substantial Detailed Design Stage) to within a month of release of the design landscape plan. This will ensure the project has required evidence for certain credits. This request was approved via Aconex reference WSOCO-CONNOTICE-000746.

- Confirming that energy is defined for SWTC Table D.5-2 Sustainability Requirement Targets for construction and operational energy (20% reduction in construction energy and 80% reduction in operational energy) as electricity - This was discussed and minuted for the M7-M12 Integration project - WSO Co, TfNSW and JHG Sustainability Meeting on the 26/2/24 with minutes circulated by Daniel Hogan on the same day.
- The project has yet to complete its annual stakeholder audit for the Sta credits, due to continued heavy workloads for John Holland's group level auditor. Whilst the project still has a couple months to complete this audit, if there is continued lack of availability, the project has an external auditor organised and will pursue that avenue.
- Internal reviews have identified that the project was not tracking well with contractual targets to divert 60% of office waste from landfill. The Sustainability team is working with office management to ensure this target can be improved by procuring the appropriate bins for office waste and working with the procurement team and ensuring waste contractors understand our requirements.

All opportunities for improvement identified in audits are entered into John Holland soteria system for tracking. An audit cannot be closed out until all actions associated with areas for improvement are closed. As can be seen in Table 5, all audits are closed except for the internal audit which took place in April with only two actions relating to that audit which remain open.

5.4 Opportunities

As discussed in Section 3, there are several opportunities which present substantial sustainability opportunities. These opportunities are being tracked in the "Sustainable Initiatives, Innovations and Opportunities Register". Each opportunity is being assessed using a quantified decision-making matrix which assesses the opportunity across several aspects including cost, development time, reliability etc. The below provides a high-level overview update of some of the opportunities being explored.

1. Electric excavator – As noted in Section 3, the excavator has already been successfully trialled on the project. The project is currently pursuing additional internal John Holland funding and support for the electric excavator trial at AF9 which would include additional charging infrastructure to enable longer term use, and zero emissions operation of the excavator. This support would be from the Technology Engineering and Knowledge Group, which currently has applications open for innovation funding.
2. Solar/battery powered site sheds – the construction team is hoping to install more of these site sheds in the coming months.
3. Reduced carbon bio-bitumen – currently working with asphalt suppliers on pricing for future tenders.
4. High RAP in asphalt – currently working with suppliers on ensuring this option is included in future tenders.
5. Crushed solar panel glass – working with the supplier on ensuring the glass meets NSW EPA and TfNSW requirements so suppliers can use it as part of their products on the project.
6. Recycled Silt socks – The use of [redacted]ecycled silt socks will be implemented on the project with purchase orders approved for supply. The project will aim to claim this innovation as an Australian first with ISC.

6. Sustainability Data

6.1 SWTC Compliance and ISC Scorecard Projections

The project continues to anticipate an estimated Design Rating score of 80.23 with a medium level of risk. As is typical given the standard weightings assessment distribution of points, Management, Energy, and Discharge credits are weighted highly, and project performance in these areas is expected to form a significant portion of the project's rating score. Ecology credits are also currently forming a significant portion of the points making up the projects projected rating score, largely due to the project's proximity to ecological habitats, and the amount of the project footprint that was originally vegetated. The relative contribution of various credits and credit categories has been finalised with the verified weightings assessment.

The project remains in good standing with regards to its SWTC sustainability requirements, with majority either in progress or in compliance, with the remainder either not used (for example Table D-5.1), or not yet relevant (e.g. requirements for submission of Round 1 of the As-Built Rating). This SWTC compliance is not expected to change significantly between reports, though any non-compliance will be highlighted and explained.

The team has now drafted and provided to WSO Co and TfNSW the majority of the credits which are not reliant on other external information (primarily the Stage 2 Design and Landscape Plan (DLP)) and as noted in the credit traffic lights. The remainder of the credits will be provided as external information becomes available prior to the Round 1 Submission.

Figure 7: Progress against sustainability targets

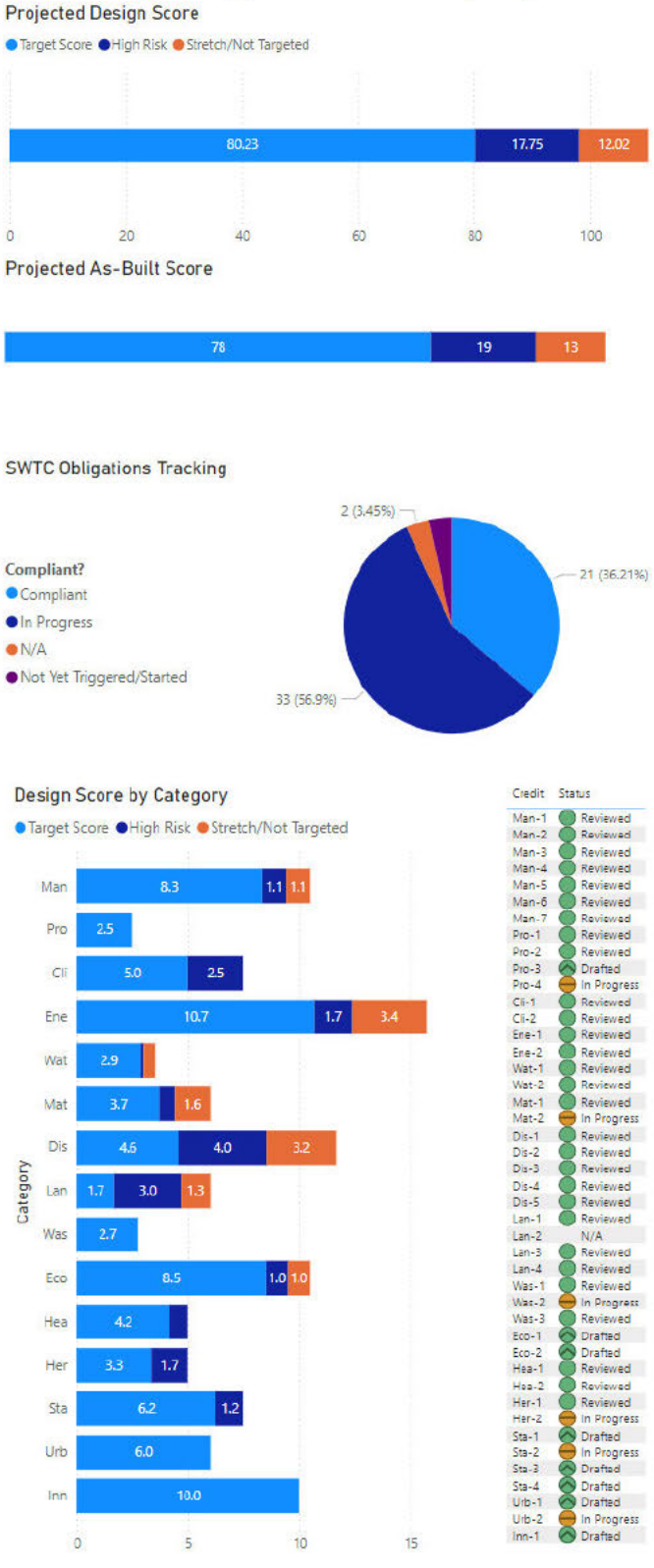


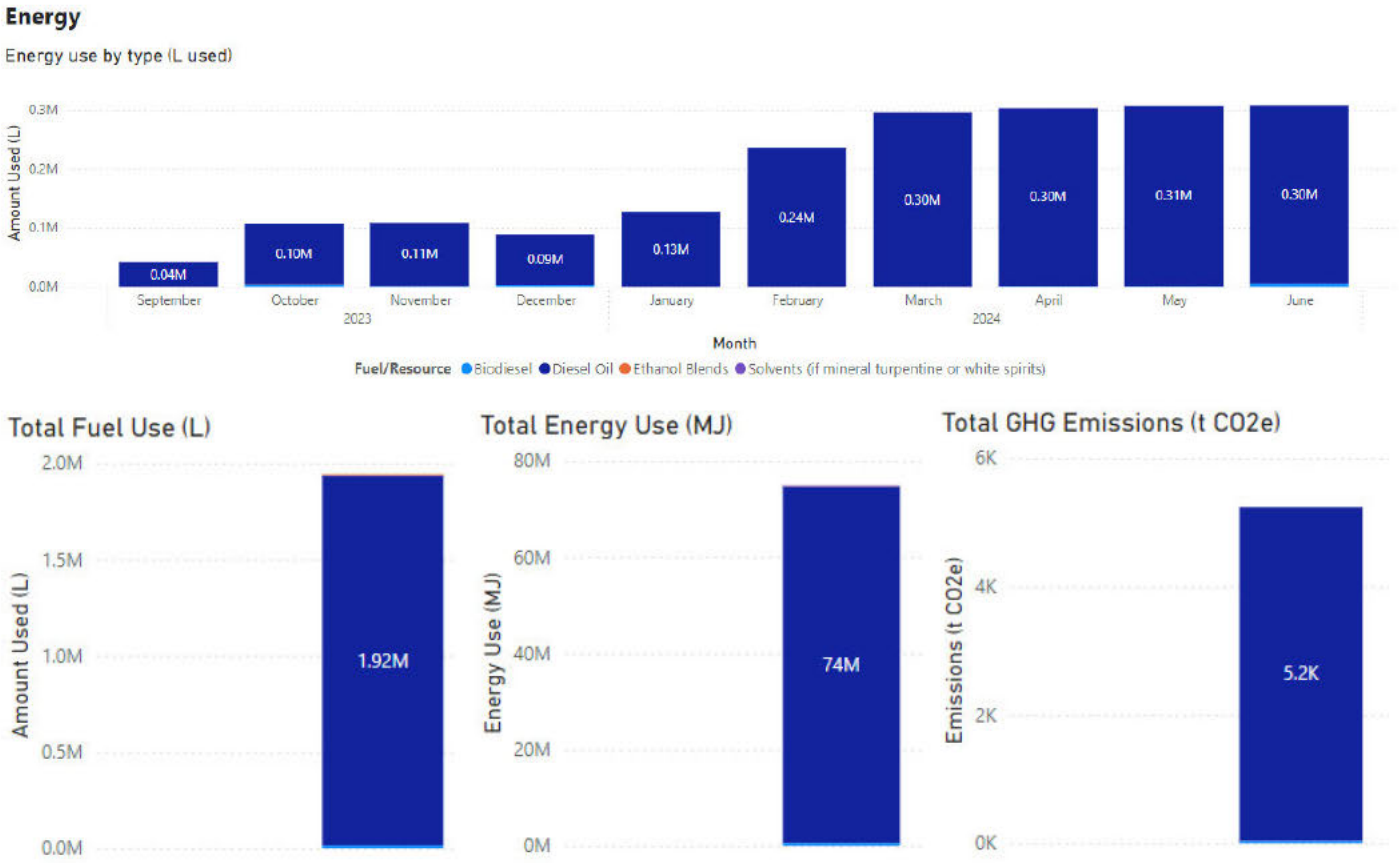
Figure 8: Progress against sustainability targets

Category	Minimum R...	Nominated ...	Progress	Comment
IS V1.2 Design Rating	Excellent (>65)	75/100	78.36	Current target score with medium level of risk.
IS V1.2 As-Built Rating	Excellent (>65)	75/100	76.77	Current target score with medium level of risk
Percentage of usable spoil (uncontaminated surplus excavated material) diverted from landfill (not including Virgin Excavated Natural Material (VENM))	95%	100%	92%	Based on "aggregate" that has been sent offsite. Vast majority of useable spoil (not accounted for yet) will be reused as part of cut and fill works.
Percentage of VENM diverted from landfill	100%	100%	In progress	No data to report yet given VENM not being sent offsite.
Percentage of construction and demolition waste (defined as 'Building and demolition waste' in the NSW EPA's Classifying Waste Guidelines 2014) diverted from landfill	80%	>90%	99%	
Clean concrete beneficially diverted from landfill	100%	100%	100%	
Clean asphalt pavement reclaimed/diverted from landfill	100%	100%	100%	
Percentage of construction stage electricity sourced from renewable energy generated onsite and/or accredited renewable energy	20%	100%	Not yet commenced	Greenpower organised with commercial team, AF9 not yet connected to grid.
Percentage of construction stage energy use offset (in accordance with the Australian Government National Carbon Offset Standard)	6%	10%	In progress	The project team is currently focusing on reducing scope 1, 2 and 3 emissions to the greatest extent possible to ensure we meet this target from our basecase
Percentage of water which is sourced from non-potable water sources during construction	15%	15%	61%	Wat-2 modelling projects an overall 84% non-potable water use substitution for construction
Percentage reduction in construction potable water consumption versus a business-as-usual design	33%	33%	61%	Wat-1 modelling projects an overall 42% reduction in water use for construction. Does not yet account for modelled water use reduction percentages.
Percentage of cement replacement material, measured by mass, used in concrete during the construction stage	10% (R53, B80); 30% (R82, R83)	30% (R53, B80); 40% (R82, R83)	61% (R53, B80); 66% (R82, R83)	Average mix design SCM content for general supply contract is 48%
Percentage of recycled material used in road base and sub-base during the construction stage	10%	10%	30%	30% of aggregates to date have been sourced from recycled materials.
Percentage reduction in greenhouse gas emissions from operational energy versus a business-as-usual design	15%	80%	82.1% modelled	Ene-1 modelling projects a 82% reduction in emissions associated with operational electricity use
Percentage reduction in greenhouse gas emissions from construction energy use versus a business-as-usual baseline	10%	20%	27% modelled	Ene-1 Model projects a 27% reduction in emissions from construction electricity. 100% renewable electricity is planned for grid electricity supply. LEDs, including motion sensor lighting at AF9.Demand reduction e.g. signage/education also underway. Solar lighting in use on EDC.
Percentage LED light sources in street lighting and other permanent area lighting installed for public amenity or safety purposes	100%	100%	100%	Reviewed ITS lighting design package and all include LEDs
Percentage reduction in supply chain carbon emissions (including embodied energy in materials) versus a business-as-usual baseline Note: Supply Chain emissions are to be estimated using the ISC IS V2.010 Materials Calculator.	10%	10%	16% modelled	Materials quantities and footprint currently being collated and inputted into materials calculator. Baseline assumptions have been verified by ISC
Percentage of suppliers and supply chain applying sound labour practices Note: The project must address relevant requirements of the Modern Slavery Act (NSW) 2018 and the Modern Slavery Act (Cth) 2018. At a minimum, human rights and labour practices must be considered in alignment with ISO 20400.	100%	100%	Integrated into procurement process	Part of sustainability section of procument questionnaire and assessment in tender analysis
Percentage of office paper used on the project site that is high recycled content paper (50 per cent or more recycled content)	100%	100%	100%	100% recycled paper currently being used
Percentage of single use and/or non-recyclable kitchen items supplied to on-site facilities	0%	0%	No single use items in kitchen	Discussed with [redacted] no single use kitchen items to be used
Percentage of timber to be sourced from either reused/recycled timber or from sustainably managed forests that have obtained Forest Management Certification (FMC).	100%	100%	Integrated via procurement process	Construction team is aware of sustainable timber requirement
Percentage of office waste diverted from landfill	40%	>60%	25%	Conservative estimate as waste contractor unable to provide direct diversion rates. [redacted]ow on project, updated diversion figures to be provided in following reports.

6.2 Energy and Emissions

Energy use has seen an uptick in late Q1 and early Q2 of 2024, largely associated with good progress at the Elizabeth Drive Connection (EDC), especially with earthworks and piling. Energy use is expected to continue to increase as construction continues to ramp up, especially along the M7 as well as a continuation of works at EDC/M12 East. As expected on a construction project, energy use and associated emissions are almost entirely from diesel usage. Biodiesel usage by John Holland has shrunken as a portion of overall fuel use, as more subcontractors join the project and more intensive activities where plant is not necessarily ready for biodiesel is undertaken. Electricity use is expected to be reported next quarter once the main site compound at AF9 is finally connected to the grid, but electricity usage is not expected to account for any significant percentage of overall energy use on the project. As for the following sections, reporting lags mean that data for June is not representative of the full range of data for that month.

Figure 9: Energy use by month



6.3 Water

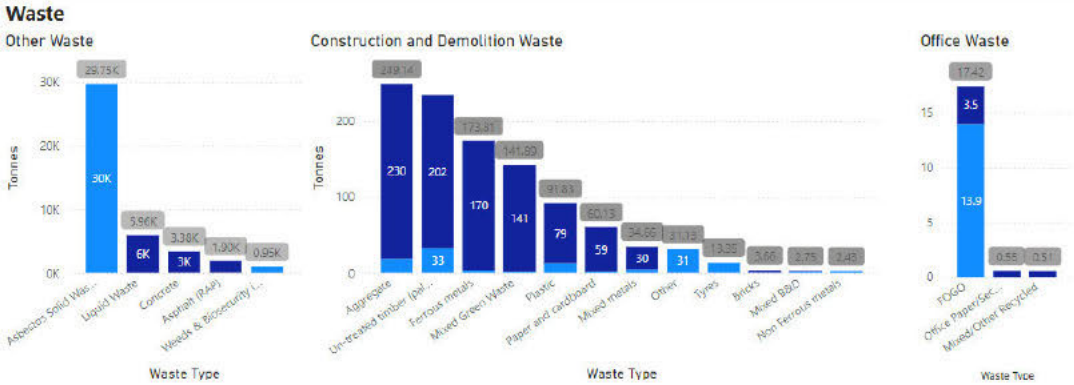
Water use is (until the team/project receives the latest water bill from Sydney Water expected on a quarterly basis) largely comprised of subcontractor supplied data, with the water sources utilised by various subcontractors dependent on activities conducted and the companies involved. Potable and non-potable water usage will vary depending on activities, for example whilst onsite dust suppression may reuse water from onsite sources, water used in Non-Destructive Digging (NDD) activities may utilise water brought to site by the vacuum trucks for that purpose, which is often from potable, or reported as potable sources by the subcontractor. Water use is also highly weather dependent, given that weather influences the need for additional dust suppression, as well as the water available onsite for reuse. Water utilised in various activities can also be program and construction activity dependent, with Non-Destructive Digging and potholing occurring prior to certain works and not consistent in nature. As above, a lack of potable water usage figures for May and June is due to reporting lag rather than a lack of usage, which will be reflected in the next quarterly report.

Figure 10: Potable/non potable water use by month

6.4 Waste

The project continues to utilise [redacted] for much of its Construction & Demolition (C&D) waste streams broadly comparable to the inert and non-hazardous waste stream as it relates to the Was-2 credits. Recovery rates for C&D waste are generally good, with slightly poorer performance for plastics and aggregates, though the aggregate values are still above benchmark ISC criteria. The project continues to encounter various unrecyclable waste streams including asbestos containing materials which are being sent off site to landfill. Interim office waste data is now presented, noting that this is a conservative estimate based off other commercial provider's methodologies, as the early works waste contractor is unable to provide diversion rates directly. As noted, the project is working to improve the office waste diversion rate, including through signing a new main works waste contractor to provide an increased range of office waste diversion streams, which is expected to help improve office waste diversion rates.

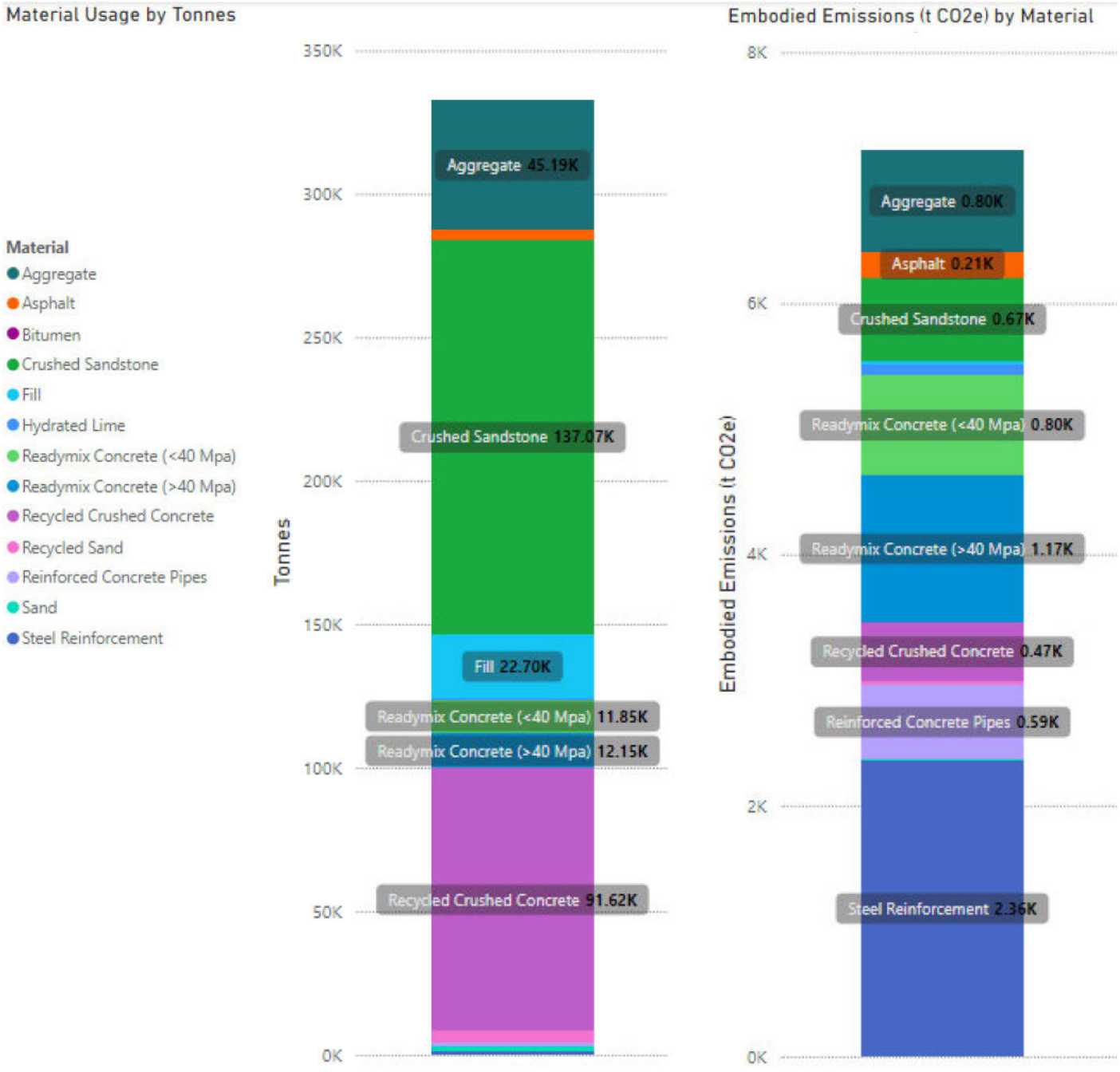
Figure 11: Waste on the project by type



6.5 Materials

Whilst materials utilised are primarily still aggregates (with respect to tonnage utilised), the embodied emissions are far more diversely spread, and heavily impacted by steel and concrete that the project has begun to utilise. The raw tonnages of such materials are insignificant when compared to aggregates used on the project, forming narrow slivers of the tonnage graph on the left. However, they compose far more significant portions of the embodied carbon emissions for the project. This is particularly the case for steel reinforcement, which is barely visible at the bottom of the tonnage graph, but which forms a significant portion of the embodied emissions for the project to date.

Figure 12: Material usage on the project



7. Social Inclusion

The M7-M12 Integration project is committed to building, valuing, and promoting gender diversity at all levels and creating sustainable career pathways in construction. We are removing barriers to make our industry more inclusive and appealing for generations to come.

34% of people inducted on the project live locally to Western Sydney

7.1 Late-Start Pre-Employment programs

Historically, construction work has been synonymous with early start times, typically 7am on weekdays. Recognising that this may be a deterrent for individuals with caregiving responsibilities or other morning commitments, the M7-M12 Integration project, supported by NSW Women in Construction Industry Innovation Program, piloted a new program to address standard working hours.

The project's Late-Start program includes a pre-start meeting at 8:45am, ensuring all employees receive essential information that would otherwise be conveyed at the 6:45am meeting. Additionally, the program consists of a pre-employment program which offers permanent employment with John Holland from the commencement of the four-week training period, and led to 100% of participants gaining an apprenticeship with John Holland.

By adopting this later start time, we can create new opportunities for those with early morning responsibilities, allowing them to engage in and benefit from a fulfilling career in construction.

Figure 13: Excerpt from promotional flyer for Late-Start program applications

7.2 Flex from the Start Initiative

Flex from the Start is an initiative supported by the NSW Government's Women in Construction which is being trialled on three John Holland projects: M7-M12 Integration project, Waterloo Over Station Development and Transport for NSW's More Trains, More Services program. The initiative is about making construction a more diverse, inclusive and safe workplace for everyone, with the goal of identifying scalable and sustainable flexible work options that can create lasting change in the industry.

Research found that to increase the participation and retention of women, the industry must challenge and change the working conditions of men and the sector more broadly. Flex from the Start is aiming to do that by normalising flex on projects and supporting the outcomes of the Industry Innovation Program.

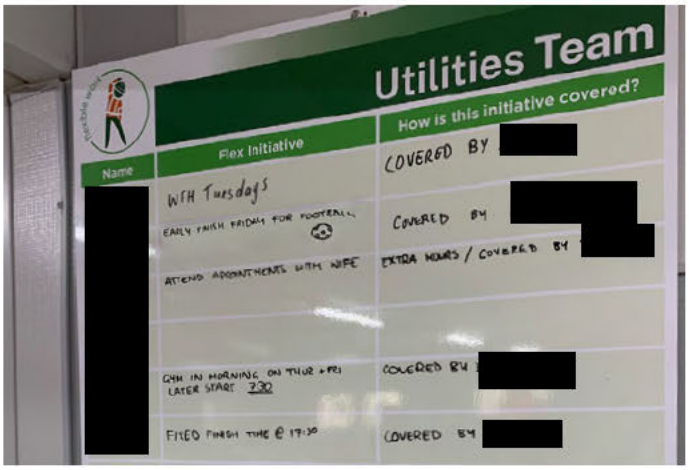
11% of people inducted on the project are female, with 6% in non-traditional roles

The M7-M12 Integration project's approach included site leaders role modelling flexible work arrangements, having 'flex boards' erected, where employees record their flexi-hours (late starts or early finishes), one-on-one flex conversations between managers and employees, and programs that challenge typical start times and work patterns.

To achieve this, the project has implemented several strategies:

- facilitation from the People team to help team leaders implement flexibility
- workplace training on flexibility which was facilitated by construction leaders to show support and buy-in for the initiative
- visible leadership support
- a "week in the life" analysis of Site Engineers and Supervisors to identify opportunities for improving efficiency and productivity, ultimately supporting a better work-life balance
- individual team "flex boards" to showcase team members' needs.

Figure 14: Utilities team flex board



15% of people inducted on the project are under the age of 25

7.3 Female Constructors of the Future STEM Program

The M7-M12 Integration project and John Holland are shining a light on female construction workers to show the next generation that careers in STEM (Science, Technology, Engineering and Mathematics) aren't defined by gender.

The Female Constructors of the Future program is designed to inspire young girls living in Western Sydney to consider a career in STEM through a range of construction-based activities at schools and local shopping centres during the summer school holidays.

The program, supported by NSW Government Women in Construction Industry Innovation Program, will provide participants with fun, hands-on exercises that harness fundamental building and engineering skills. Additionally, it will provide an opportunity to engage with female engineers currently involved in the M7-M12 Integration project.

7.4 Focus on Wellbeing

The Australian construction industry is notorious for long hours, taxing work and high rates of mental illness. Devastatingly, the industry loses one construction worker every second day to suicide. The M7-M12 Integration project is leading the way in celebrating wellbeing and work-life balance, demonstrating that project milestones can still be reached in a workplace where flexibility is prioritised. The project's strategy for achieving this goal centres around its Wellbeing committee, which has the aim of revolutionising industry norms and enhancing the health and happiness of the workforce. Over the course of the project, the Wellbeing committee has implemented:

- **On-site gym and wellbeing spaces:** Transformation of the project site into a campus-style workplace with dedicated wellbeing spaces.
- **Employee Assistance Program (EAP):** Available 24/7 for complimentary and confidential sessions, with on-site sessions throughout the year.
- **Mates in Construction General Awareness Training:** Project goal for 80% of the workforce to complete this training, equipping them with the knowledge and tools to engage in meaningful conversations about mental health.

Figure 15: On site Gym

Figure 16: Site Map with Wellbeing Spaces

Figure 17: Wellbeing Room/Chill Out Zone to take a moment to relax away from the office space

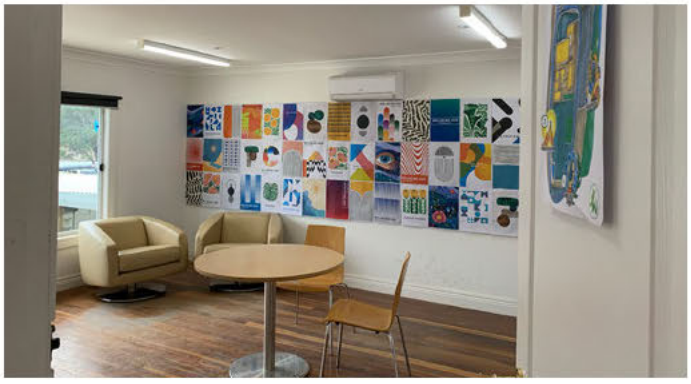
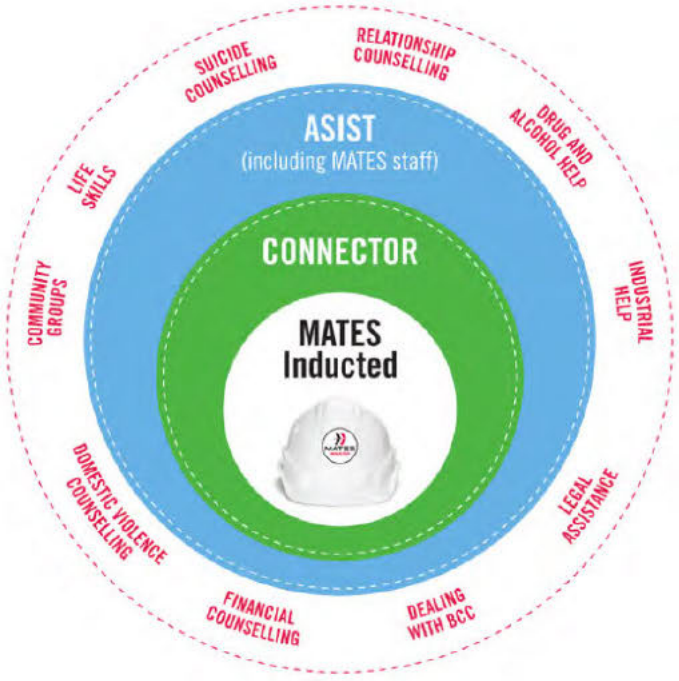


Figure 18: Mates in Construction training matrix

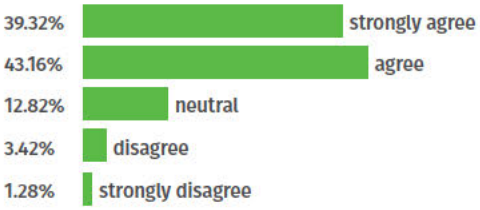


- **Mental Health First Aiders (MHFA):** Training for employees to become MHFAs, with 21 trained individuals on-site to offer immediate support.
- **Look Up and Live campaign:** Uses cut-outs of actual team members to draw attention to the dangers of live wires.
- **Movember fundraiser:** Raised $21,000 to date for various men's health projects.
- **Special interest clubs:** Allow team members to bond over shared interests such as running, sport, or music.
- **City2Surf fun run:** Promoting health and prioritising team comradery.

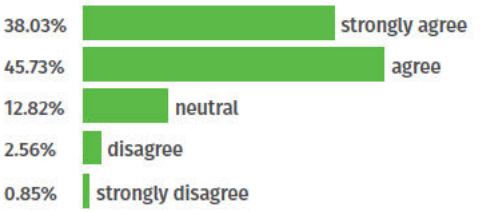
As a result of the committee, the project has received positive employee feedback, delivered via regular Pulse surveys. In July 2023, 77% of respondents agreed or strongly agreed that employee wellbeing is a priority on the project, which increased to 84% in February 2024. The majority of respondents also believed that their direct managers care about their wellbeing, with 90% in agreement in July 2023 and 89% in agreement in February 2024.

Pulse Survey: February 2024
Key findings

I feel supported when requesting flexible work arrangements (formal or informal)



I believe employee wellbeing is a priority at M7M12



My direct manager cares about my wellbeing

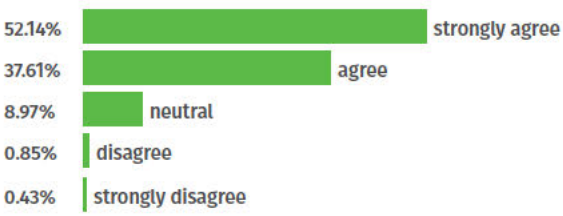


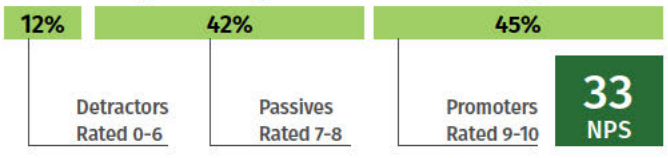
Figure 19: Mental Health First Aiders are easily identified by their unique shirt

Figure 20: Look Up and Live campaign signage

Figure 21: City2Surf participants from the project

Do you think your job positively impacts your mental health?

How likely is it that you would recommend the M7-M12 Integration Project to a friend or colleague?



7.5 School Based Traineeships

School-based apprenticeships and traineeships (SBATs) offer more than just part-time jobs; they provide students with a valuable opportunity to pave the way for their desired careers while completing their HSC.

The M7-M12 Integration project have made a two year commitment to three female year 11 students who are employed to undertake a school-based traineeship in Certificate II Civil Construction. These students from [redacted] Western Sydney and are effectively juggling their school and TAFE studies alongside their hands-on construction experience and earning a salary.

Programs like these not only create new opportunities for students but also inspire them to step out of their comfort zones and pursue something meaningful.

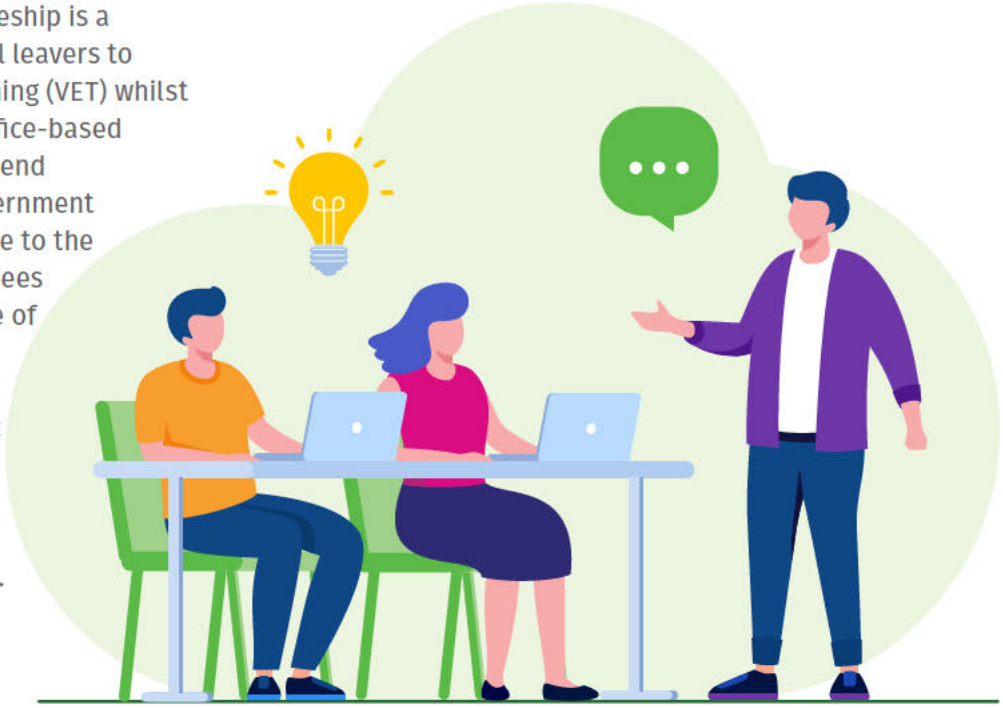
Figure 22: School based trainee installing sign mount

5% of people inducted on the project are learning workers in traineeships or apprenticeships

12% of people inducted on the project are women in the trades workforce, including apprenticeships, exceeding our target by 8%

7.6 Project Management Traineeships

We are working with the NSW Department of Education to host students undertaking the NSW Government Infrastructure Traineeship. The traineeship is a two-year program that enables school leavers to access Vocational Education and Training (VET) whilst completing a work placement in an office-based infrastructure role. Trainees aim to spend three eight-month rotations with government and industry to gain valuable exposure to the whole infrastructure ecosystem. Trainees also gain an understanding of the role of each party in the successful delivery of public infrastructure. The program arms trainees with workplace-specific skills, experience, and knowledge so they are prepared for further study, and creates a pipeline of skilled young people for further employment.



8. Social Procurement

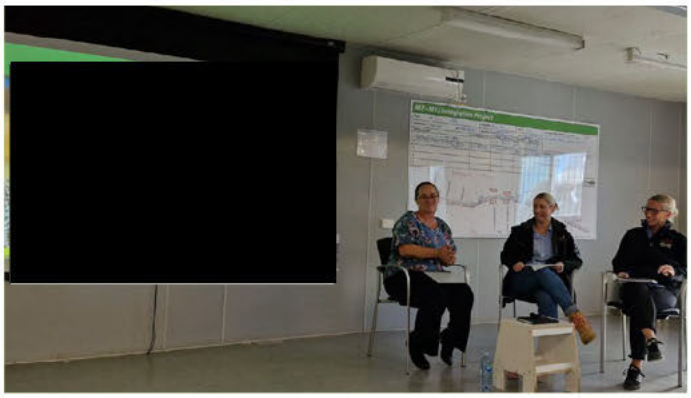
M7-M12 Integration project prioritises social procurement as it creates job opportunities, promotes diversity and inclusion, and contributes to the social and economic development of local communities. To achieve this, we have carried out the following initiatives:

3% of people inducted on the project are First Nations people, exceeding our target by 1%

8.1 Social Procurement Workshops

In partnership with the M7-M12 Integration project Commercial team, Aboriginal organisation [redacted] held a workshop for engineers to learn about the why and how of social procurement. Part of the workshop involved a Q&A [redacted] and covered a range of topics from common misconceptions about First Nations suppliers, and practical ways to remove barriers for businesses. The key take-away was that First Nations businesses are no less capable than others, however their capacity may be limited until they develop a portfolio of experience working on tier 1 projects, therefore unlocking more capital and resources.

Figure 23: [redacted] sharing at the Social Procurement Workshop



8.2 Collaboration

To celebrate NAIDOC Week 2024, we partnered with First Nations business [redacted] to host a cultural learning experience and Aboriginal art workshop. The initiative immersed team members in the art of Aboriginal and Torres Strait Islander storytelling. Guided by [redacted] the project explored the significance of storytelling and the beauty of Aboriginal art.

Figure 24: Artwork created in collaboration [redacted] for NAIDOC Week 2024

We continue to embrace and celebrate the richness of Aboriginal culture, and proudly have the artworks displayed in our offices to remind ourselves, not just during NAIDOC Week, but every day, to "Keep the Fire Burning! Blak, Loud & Proud".

Figure 25: Posters from NAIDOC Week 2024 sharing what the week means to our staff

JOHN HOLLAND

M7 M12 Integration Project