Environment Dashboard - Period 6 2016-17

Period Update

Quarterly Update

Version for Issue October 2016 - Crossrail contract numbers and names and Crossrail worksite names have been deleted and numbers shown in the dashboard (e.g. C001and Site 1) have been used to illustrate how the information was displayed. Details of works on site have been deleted and replaced by XXXXX.

Kay Accomplishments

Period Overview

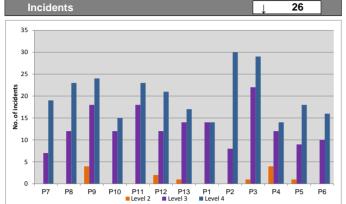
The Green Systems Recognition Scheme for promoting positive environmental behaviour was launched at the Environmental Managers Forum.

Kev Issues

Management of construction noise and contaminated land at Site 16 have been a key issue during the period.

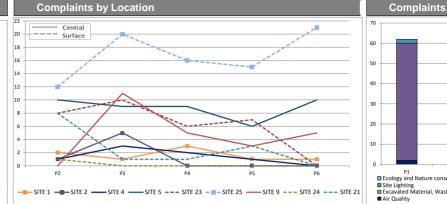
Progress Update

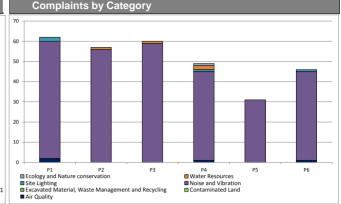
There is a focus this quarter on contractors preparing waste strategies to cover the fit out works.



Central: There was one Level 3 incident and sixteen Level 4 incidents during P6. Seventeen incidents were reported in total, an decrease from P5 when twenty two were reported. C001 recorded eleven incidents, which have largely been the result of them continuing to carry out site inspections and recording findings on RIVO 5 anear misses.

Surface: There were nine Level 3 incidents in P6. Eight incidents were due to minor oil spills resulting from burst hose pipe or machine failures on site. All spills were contained and cleaned up immediately. One incident related to XXXX.

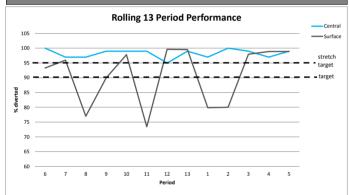




Central: Complaint numbers increased across the central section from eighteen in P5 to twenty five in P6. Twenty four complaints were related to noise and vibration and one was related to site lighting. The most complaints (ten) were reported for Site 5 and are related to XXXXX.

Surface: There were twenty one complaints received across the surface section during P6, an increase from P5 when thirteen were reported. Twenty complaints were due to noise and vibration and one related to air quality.

Construction Waste Diverted from Landfill



Central: Crossrail has met the stretch target again this period for the recycling, recovery and reuse of its construction waste. 99% of waste was diverted from landfill during P5, slightly more than in P4 when 97% washieved.

Surface: The surface section met the stretch target this period for the recycling, recovery and reuse of its construction waste. 99% of waste was diverted from landfill in P5, the same as in P4.

Construction Waste Produced / £100K

Communic	2016/17 P5	Cumulative to 2016/17 P5	
AREA 1	<u> </u>	<u> </u>	<7.9
C001	no data	N/A	3 credits
C002	4.17	5.04	
C003	4.21	4.24	
C004	0.35	4.88	
C005	9.13	4.31	7.9 - 15.6
C006	2.64	2.71	2 credits
C007	1.97	0.84	2 Ground
C008	0.17	4.23	
C009	no data	2.93	
C010	0.94	0 10.1	
AREA 2			15.6 - 21.1
C011	0.66	0.7	1 credit
RDEEAM tora	ot	~ 7.0	11

This is a new metric introduced last period (P5). It represents the tonnes of construction waste generated on eac contract per £100,000 expenditure. Performance is measured against the BREEAM credit target.

The aim of this metric is to encourage contracts to reduce the amount of construction waste they generate, and to help those contracts striving for BREEAM accreditation to achieve the maximum number of credits available to them.

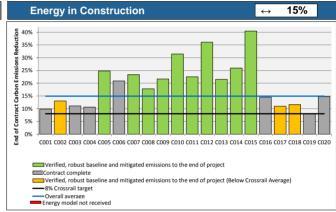
Contracts C350 and C360 will be added to this metric in due course. The civils contracts (C012, C013, C014) have no

	110	/130				
٦	Contract	Round 5 Performance	Agreed Target	Current Performance	RAG Score	
-	AREA 1					
-	C001	3	1	1+		_
i	C002	2+	2	2		Target score
-	C003	1	2+	1		met
١	AREA 2					
٦	C004	2	2	2		
-	C005	1+	2	2		
ı	C006	2	2+/3	2		
١	C007	3	3	3		At risk of not
-1	C008	3	3	3		meeting target
-	C009	3	3	3		score
╝	C010	2+	3	2		Score
٦	C011	2+	3	3		
١	C012	2+	3	3		
ı	C013	2+	3	2		
١	C014	1	1	1		Not mosting
-1	C015	1+	2	1+		Not meeting
١	AREA 3					target score
╝	C016	2	3	2+		

Noise targets were assigned to each contract according to the sensitivity of the site to noise disturbance. The target scores are: 1 - Compliant, 2 - Beyond Expectations, 3 - World Class.

The measures that can be taken to manage noise and vibration in order to achieve the agreed target are outlined in Crossrail's Noise Supplier Performance Matrix. Noise action plans specific to each contract have been produced in accordance with this. Evidence of the steps taken to manage noise are assessed every period and used to track current performance.

RAG scores for C004 has improved from amber to green this period due to a revised target as a result of reduced scope of works. C013 have not complied with the works information on a number of occasions and are yet to resolve consent issues regarding the blockade works. C006, C015, C010 and C016 need to work through their noise action plans in order to achieve their target score.



All of the carbon and energy models have now been submitted. It is confirmed that for 2016/17 Q1, overall energy reduction across the project is 15%. Crossrail is therefore exceeding the 8% target. Contracts performing below 15% are shown in amber Uddated quarterly: next update due P8.

BREEAM/CEEQUAL

Contract		CEEQUAL (C)	Progress	
AREA 1				In Progress - on
C001	Site 1	С	Achieved	
C002	Site 2	С		target
C003	Site 3	С	Achieved	
C004	Site 4	С	N/A	
C005	Site 5	В	Achieved	
C006	Site 6	В		In Progress- at
AREA 2				risk
C007	Site 7	С	Achieved]
C008	Site 8	С		
C009	Site 9	С		
C010	Site 10	В		In Progress -
C011	Site 11	В		unlikely to
C012	Site 12	В		
C013	Site 13	В		achieve target
C014	Site 14	В		
C015	Site 15	С		N/A
C016	Site 16	В		Does not apply
C017	Site 17	В		Does not apply
C018	Site 18	В]
C019	Site 19	В	N/A	

All contracts are currently on track to achieve their respective targets, except for Site 006 which is considered at risk.

Site 8 final design has been approved with previous provisional BREEAM-scored design elements removed. The contractor is expected to run a further assessment to determine where they are from their earlier 'expected' score of 59.16%. Since the score incorporating elements that have since been scoped-out was close to the 'Very Good' scoring threshold, the contractor is now at risk of not meeting this contractual scoring target.

C000 series contracts have not been included in the table as BREEAM/CEEQUAL are not applicable.

Updated quarterly: next update due P8.



■ Compliant ■ Dispensed ■ Non-compliant — Actual Achievement % (rolling quarterly average since new O&T's)

NRMM actual rolling performance (% of qualifying construction equipment that has emission control fitted i.e either tier IIIB or fitted with DPF) increased to 87% for Q1, from 85% for Q4.

NRMM data was not received this quarter for C001, C002 and C003. The data for these contracts is therefore representative of the previous quarter (Q4) and will be updated in time for the next period report (P6) to represent the current quarter (Q1).

Updated quarterly: next update due P8.

Diodiversi	ιy				JZ /0
Location	Units Available	Units Delivered	RAG Score	Delivery Method	•
Site 1	12.778	0		Planting scheme	Delivered
Site 2	7.062	0		Planting scheme	
Site 3	0.79	0.79		Green roof	
Site 4	2.157	0		Green roof	Plan for
Site 5	4.476	0		Planting scheme	delivery in
Site 6	1.24	1.24		Green roof	place
Site 7	1.4	1.4		Green roof	
Site 8	1.018	1.018		Planting scheme	•
Site 9	2.067	0		Planting scheme	Deliment et sielt
Site 10	0.8	0		Planting scheme	Delivery at risk
Site 11	0.047	0		Green roof	
Site 12	2.593	0		Planting scheme	•
Site 13	0.306	0.306		Planting scheme	Not
Site 14	0.142	0		Planting scheme	commenced
PROJECT TOTAL	37	5			but not at risk

Biodiversity accounting has been carried using the DEFRA methodology. The sites listed have been identified as requiring restoration and have potential for biodiversity enhancement. The biodiversity units available have been calculated based on the sites original design and progress towards delivering the units is tracked quarterly.

The Crossrall target is to deliver at least 80% of the 37 biodiversity units available across the project. Currently 13% have been delivered (by contracts showing a green RAG score) and plans to deliver an additional 19% are in place (amber RAG score). Therefore, at this stage, Crossrall is confident tent 32% of units will be delivered.

Delivery of the units at Site 1 is at risk due to site design changes and as a consequence, the units available are being recalculated. Delivery of units at Site 2 is under review after proposed changes to the delivery method, from planting to ballast. As a consequence, the units completed are being recalculated but are not expected to differ significantly from those originally available. This change is subject to planning approval by Westmisters. Work to deliver the units at Site 5 and Site 10 has not yet begun but the achievement of the units available is not yet considered to be at risk.

Updated quarterly: next update due Pt

Contract	Projected % RC	Performance		NACTletelete	
AREA 1				NWT complete and quic	
C001	6	•		wins identified and implemented	
C002	14	•			
C003	35	•			
C004	43	•			
C005	61	•	0	NWT complete but quick	
AREA 2				wins not yet identified	
C006	46	•			
C007	54				
C008	20			NBA/T in progress	
C009	41		•	NWT in progress	
C010	36				
C011	37				
C012	48			NWT not started or larg	
C013	68	•	•		
C014	4			incomplete	
C015	52	0	-		
C016	18	•	1	Contract complete	
C017	24	•			
AREA 3				Contract Complete	
C018	37				

to update the NWT with data on blockwork and review the final percentages. These outstanding tasks were discussed during a focus meeting with C015 in July; updates are awaited.

NWT: NetWaste Too

Updated quarterly: next update due P8.